

1 39943/SAH/C715

LONG WAVELENGTH VERTICAL CAVITY SURFACE EMITTING LASER

5 ABSTRACT OF THE DISCLOSURE

10 Selectively oxidized vertical cavity lasers emitting near 1300 nm using InGaAsN quantum wells are reported for the first time which operate continuous wave below, at and above room temperature. The lasers employ two n-type $\text{Al}_{0.94}\text{Ga}_{0.06}\text{As}/\text{GaAs}$ distributed Bragg reflectors each with a selectively oxidized current aperture adjacent to the active region, and the top output mirror contains a tunnel junction to inject holes into the active region. Continuous wave single mode lasing is observed up to 55°C.

15 SAH/pan

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